



28/9/99

Transmittal Note

SUPPLEMENT TO

ANNEX 3 — METEOROLOGICAL SERVICE FOR

INTERNATIONAL AIR NAVIGATION

(Thirteenth Edition)

1. The attached Supplement supersedes all previous Supplements to Annex 3 and includes differences notified by Contracting States up to 28 September 1999 with respect to all amendments up to and including Amendment 71.
 2. This Supplement should be inserted at the end of Annex 3 (Thirteenth Edition). Additional differences received from Contracting States will be issued at intervals as amendments to this Supplement.
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**SUPPLEMENT TO
ANNEX 3 — METEOROLOGICAL SERVICE FOR
INTERNATIONAL AIR NAVIGATION**

(Thirteenth Edition)

Differences between the national regulations and practices of Contracting States and the corresponding International Standards and Recommended Practices contained in Annex 3, as notified to ICAO in accordance with Article 38 of the *Convention on International Civil Aviation* and the Council's resolution of 21 November 1950.

SEPTEMBER 1999

INTERNATIONAL CIVIL AVIATION ORGANIZATION

RECORD OF AMENDMENTS TO SUPPLEMENT

<i>No.</i>	<i>Date</i>	<i>Entered by</i>	<i>No.</i>	<i>Date</i>	<i>Entered by</i>
Corr.	28/2/00	ICAO			
1	15/9/00	ICAO			
2	14/2/01	ICAO			

**AMENDMENTS TO ANNEX 3 ADOPTED OR APPROVED BY THE COUNCIL
SUBSEQUENT TO THE THIRTEENTH EDITION ISSUED JULY 1998**

<i>No.</i>	<i>Date of adoption or approval</i>	<i>Date applicable</i>	<i>No.</i>	<i>Date of adoption or approval</i>	<i>Date applicable</i>

1. Contracting States which have notified ICAO of differences

The Contracting States listed below have notified ICAO of differences which exist between their national regulations and practices and the International Standards and Recommended Practices of Annex 3 (Thirteenth Edition), up to and including Amendment 71, or have commented on implementation.

The page numbers shown for each State and the dates of publication of those pages correspond to the actual pages in this Supplement.

<i>State</i>	<i>Date of notification</i>	<i>Pages in Supplement</i>	<i>Date of publication</i>
Argentina	14/12/98	1	28/9/99
Austria	19/5/00	1	15/9/00
Belarus	21/12/00	1-2	14/2/01
Bulgaria	3/8/99	1	28/9/99
Canada	25/9/98	1-3	28/9/99
Chile	29/9/98	1	28/9/99
China	8/10/98	1	28/9/99
Croatia	6/11/00	1-2	14/2/01
Czech Republic	12/7/00	1	15/9/00
Ecuador	14/7/99	1	28/9/99
Estonia	13/10/98	1	28/9/99
Finland	8/7/98	1	28/9/99
France	9/12/98	1	28/9/99
Germany	11/9/98	1	28/9/99
Hungary	24/9/98	1	28/9/99
Iceland	26/7/99	1	28/9/99
Japan	30/9/98	1	28/9/99
Kyrgyzstan	4/10/98	1	28/9/99
Latvia	27/4/99	1	28/9/99
Mexico	20/10/00	1	14/2/01
Morocco	18/9/98	1	28/9/99
Netherlands	19/3/99	1-2	28/9/99
New Zealand	22/6/00	1-2	15/9/00
Norway	22/9/98	1	28/9/99
Panama	27/7/99	1	28/9/99
Republic of Moldova	2/10/98	1	28/9/99
Romania	5/10/98	1	28/9/99
Russian Federation	30/10/98	1	28/9/99
Slovakia	1/12/98	1	28/9/99
Spain	13/8/99	1	28/9/99
Sweden	5/10/98	1	28/9/99
Ukraine	7/7/99	1	28/9/99
United Arab Emirates	21/9/98	1	28/9/99
United States	25/9/98	1-3	28/9/99

2. Contracting States which have notified ICAO that no differences exist

<i>State</i>	<i>Date of notification</i>	<i>State</i>	<i>Date of notification</i>
Angola	19/8/99	Lebanon	11/11/98
Bahrain	22/3/99	Madagascar	3/9/99
Barbados	22/7/98	Mali	16/8/99
Benin	22/7/99	Mauritania	19/7/99
Botswana	24/9/98	Monaco	19/7/99
Brazil	7/10/98	Niger	19/7/99
Burkina Faso	6/8/99	Peru	17/2/99
Cameroon	9/9/99	Portugal	26/10/98
Central African Republic	9/8/99	Saudi Arabia	5/7/99
Chad	15/7/99	Singapore	4/11/98
Congo	23/6/99	Switzerland	8/9/99
Denmark	11/6/98	Togo	1/9/99
Egypt	19/7/98	Trinidad and Tobago	2/10/98
Equatorial Guinea	20/7/99	Tunisia	16/9/98
Gabon	25/8/99	Uganda	10/7/98
Iran (Islamic Republic of)	18/8/99	United Kingdom	16/9/98
Ireland	17/9/98	United Republic of Tanzania	23/7/99
Israel	14/9/98	Zambia	16/7/99
Jordan	1/7/98		

3. Contracting States from which no information has been received

Afghanistan	Cyprus	Italy
Albania	Democratic People's Republic of Korea	Jamaica
Algeria	Democratic Republic of the Congo	Kazakhstan
Antigua and Barbuda	Djibouti	Kenya
Armenia	Dominican Republic	Kiribati
Australia	El Salvador	Kuwait
Azerbaijan	Eritrea	Lao People's Democratic Republic
Bahamas	Ethiopia	Lesotho
Bangladesh	Fiji	Liberia
Belgium	Gambia	Libyan Arab Jamahiriya
Belize	Georgia	Lithuania
Bhutan	Ghana	Luxembourg
Bolivia	Greece	Malawi
Bosnia and Herzegovina	Grenada	Malaysia
Brunei Darussalam	Guatemala	Maldives
Burundi	Guinea	Malta
Cambodia	Guinea-Bissau	Marshall Islands
Cape Verde	Guyana	Mauritius
Colombia	Haiti	Micronesia (Federated States of)
Comoros	Honduras	Mongolia
Cook Islands	India	Mozambique
Costa Rica	Indonesia	Myanmar
Côte d'Ivoire	Iraq	Namibia
Cuba		Nauru

Nepal	Samoa	Tajikistan
Nicaragua	San Marino	Thailand
Nigeria	Sao Tome and Principe	The former Yugoslav Republic of Macedonia
Oman	Senegal	Tonga
Pakistan	Seychelles	Turkey
Palau	Sierra Leone	Turkmenistan
Papua New Guinea	Slovenia	Uruguay
Paraguay	Solomon Islands	Uzbekistan
Philippines	Somalia	Vanuatu
Poland	South Africa	Venezuela
Qatar	Sri Lanka	Viet Nam
Republic of Korea	Sudan	Yemen
Rwanda	Suriname	Yugoslavia
Saint Lucia	Swaziland	Zimbabwe
Saint Vincent and the Grenadines	Syrian Arab Republic	

4. Paragraphs with respect to which differences have been notified

<i>Paragraph</i>	<i>Differences notified by</i>		<i>Paragraph</i>	<i>Differences notified by</i>
2.3	New Zealand			Panama
3.2.1	United States			United Arab Emirates
3.3.1	Canada	4.4		United States
	Japan	4.5		Belarus
	Spain	4.5.2		Slovakia
3.4.2	Canada	4.5.4		Estonia
3.5	New Zealand	4.5.5		Estonia
3.5.2	France			Belarus
4.1.3	Canada			Canada
4.1.8	New Zealand			Estonia
4.2.1	Panama	4.5.6		Kyrgyzstan
4.3.1	Canada			Russian Federation
	China			Belarus
	Iceland			Canada
	Japan			Estonia
	New Zealand			Latvia
	Panama	4.5.7		Russian Federation
	United States			United States
4.3.3	Argentina	4.5.8		Croatia
	Belarus			Germany
	Canada	4.5.9		Belarus
	China			Bulgaria
	Ecuador			Russian Federation
	France			Belarus
	Germany			Estonia
	Netherlands	4.6.3		Russian Federation
	New Zealand			United States
				China

<i>Paragraph</i>	<i>Differences notified by</i>	<i>Paragraph</i>	<i>Differences notified by</i>
4.6.4	Canada	4.14.2	Mexico
	New Zealand		New Zealand
4.6.5	Canada	5.8.1	New Zealand
	Ecuador		
	Japan	Chapter 6	Slovakia
	United States	6.2.4	Austria
4.7	Ecuador	6.2.5	Belarus
	New Zealand		Canada
	Panama		Netherlands
4.7.5	Belarus		New Zealand
4.7.8	Croatia		United States
	Czech Republic	6.2.6	Estonia
	France	6.2.8	New Zealand
	Germany	6.2.17	Canada
	Latvia		United States
	Romania	6.2.18	United States
	Slovakia	6.2.19	Canada
4.7.11	Belarus		New Zealand
4.7.13	Morocco		United States
4.7.14	Croatia	6.2.20	Kyrgyzstan
	Germany	6.3	Canada
	Russian Federation		United States
	Slovakia	6.3.1	Argentina
	United States	6.3.2	Panama
4.8.2	United States	6.3.10	Belarus
4.8.4	Canada		Netherlands
	Iceland	6.3.11	Belarus
	Sweden		Netherlands
	United States		New Zealand
4.8.5	United States	6.3.12	Netherlands
4.8.6	Canada	6.3.13	Netherlands
	Japan		New Zealand
	Latvia	6.3.14	Belarus
	New Zealand		Netherlands
	United States		New Zealand
4.9.3	Latvia		Spain
4.9.5	Latvia	6.4	Belarus
	New Zealand		Canada
	United States		Morocco
4.11.1	Kyrgyzstan		United States
4.12.5	Ecuador	6.4.1	Argentina
4.13.1	Canada		Bulgaria
	United States		Chile
4.13.2	Argentina		China
	Canada		Croatia
	Ecuador		Latvia
	New Zealand		Spain
	United States		

<i>Paragraph</i>	<i>Differences notified by</i>	<i>Paragraph</i>	<i>Differences notified by</i>
6.4.2	Panama	7.5.1	Canada
6.5.1	United States		Croatia
6.5.6	Belarus		Finland
	New Zealand		Iceland
	Slovakia		Norway
6.5.7	Belarus		Spain
6.6.3	Belarus		Sweden
	Bulgaria	7.5.2	Croatia
	Croatia		Latvia
	Czech Republic	7.6	Argentina
	Finland		China
	Kyrgyzstan		Czech Republic
	Republic of Moldova	7.6.1	Canada
	Ukraine		Iceland
6.6.4	Belarus		New Zealand
	Canada		Spain
	United States		Sweden
7.1.1	China	7.6.2	Belarus
	Croatia		Croatia
	Czech Republic		France
	Estonia		Panama
	Hungary		Romania
	Iceland	7.6.4	Belarus
	Japan		
	Latvia	Chapter 8	Croatia
	Morocco		Estonia
	Norway		Latvia
	Romania	8.2	Morocco
	Slovakia	8.2.1	Iceland
	Sweden		Panama
7.2.1	Canada	8.2.3	Canada
	Germany	8.3	Morocco
	New Zealand		
7.2.3	Belarus	Chapter 9	New Zealand
7.3	Belarus	9.2.1	Belarus
	Panama	9.2.2	Belarus
7.3.1	Canada		Croatia
	China		Estonia
	Finland	9.2.3	Croatia
	Republic of Moldova	9.3.3	Belarus
	Ukraine		Estonia
	United States	9.3.4	Kyrgyzstan
7.4	Belarus	9.3.8	China
7.4.1	Canada		Croatia
7.5	Morocco		Spain

<i>Paragraph</i>	<i>Differences notified by</i>	<i>Paragraph</i>	<i>Differences notified by</i>
9.4.13	Canada New Zealand Sweden	10.1.11	Belarus Croatia Estonia
9.5.2	Czech Republic	10.1.13	Belarus
9.6.1	Japan United States	11.1.5	Panama
9.6.3	Croatia Hungary Panama United States	11.5.2	Belarus
10.1.5	Belarus	11.5.3	Belarus
10.1.6	Belarus	11.5.4	Belarus
10.1.7	Belarus	11.5.5	Belarus
		11.6	Panama
		11.6.5	Canada
		11.6.6	Belarus
		Attachment F	Canada

CHAPTER 4

- 4.3.3* The cloud and visibility criteria are determined in accordance with the meteorological minima established by the aeronautical authority for each aerodrome.
- 4.13.2 The term CAVOK is not used in METAR/SPECI messages.

CHAPTER 6

- 6.3.1 Trend-type landing forecasts are provided at the request of the user and/or aeronautical authority.
- 6.4.1 Forecasts for take-off are provided only on request.

CHAPTER 7

- 7.6 Wind shear warnings are not issued.
-

* Recommended Practice

CHAPTER 6

- 6.2.4 Continuous review and the issuance of amendments to TAFs for the aerodromes LOWL, LOWS, LOWI, LOWG, and LOWK are fully available during the operating hours of the aerodromes and two hours in advance of the opening of the aerodromes. Continuous review and the issuance of amendments to TAFs between midnight and 0400 hours local time are restricted to those weather elements which are included in the AUTOMETARs.
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CHAPTER 4

- 4.3.3* a), b), c) The surface wind speed is indicated in metres per second (m/s).
- 4.3.3* e) The visibility changes to or passes 800 or 1 500 m; such reports are not required when the runway visual range is indicated.
- 4.3.3* h), j) 30 m only for aerodromes operating in Category II.
- 4.4* a), b), c), d) Not included in the agreement.
- 4.5.5* Note The surface wind speed is indicated in metres per second (m/s).
- 4.5.6*
- 4.5.8*
- 4.5.9* a), b)
- 4.7.5* Runway visual range observations are made when the visibility, measured by instruments, is 2 000 m or less at dusk and at night and 1 000 m or less during the day.
- 4.7.11* The upper limit for assessment of runway visual range is the visibility value of 2 000 m at dusk and at night and 1 000 m during the day, converted according to special tables.

CHAPTER 6

- 6.2.5* b) 1) 150, 350, 600, 800 or 1 500 m.
- 6.3.10 a), b) The surface wind speed is indicated in metres per second (m/s).
- 6.3.11 The visibility changes to or passes 150, 350, 600, 800 or 1 500 m.
- 6.3.14 The vertical visibility changes to or passes 30, 60 or 150 m.
- 6.4 Forecasts for take-off are not prepared.
- 6.5.6 The WITEM and ROFOR code forms are not used.
- 6.5.7*
- 6.6.3 Area forecasts are not issued in GAMET format.
- 6.6.4

CHAPTER 7

- 7.2.3 SIGMET SST information is not issued.
- 7.3 AIRMET information is not issued.
- 7.4
- 7.6.2* a), b), d) Not available.
- 7.6.4* Wind shear warnings are not issued.
Remark: There is no ground-based wind shear detection or remote-sensing equipment.

* Recommended Practice

CHAPTER 9

- 9.2.1 c) Forecasts for take-off are not prepared.
- 9.2.2* Information for supersonic aircraft is not available.
- 9.3.3*

CHAPTER 10

- 10.1.5 AIRMET information is not issued.
- 10.1.6
- 10.1.7 b)
- 10.1.11* There is no information for supersonic aircraft.
- 10.1.13* AIRMET information is not issued.

CHAPTER 11

- 11.5.2* There is no uplink.
- 11.5.3*
- 11.5.4*
- 11.5.5*
- 11.6.6* SIGMET information is not included in VOLMET broadcasts.
-

* Recommended Practice

CHAPTER 4

4.5.8* The unit used for surface wind speed is metres per second (m/s).

CHAPTER 6

6.4.1 Forecasts for take-off are prepared only on request.

6.6.3 Area forecasts for low-level flights are prepared only for local use in the Bulgarian language.

Remark: Preparation and issuance of area forecasts for low-level flights in GAMET format is possible on request.

* Recommended Practice

CHAPTER 3

- 3.3.1 g) The exchange of meteorological information between meteorological offices is accomplished by means of a meteorological communications system organized on a national basis and is not a function assigned to individual meteorological offices.
- 3.4.2 The meteorological functions in support of flight operations at an aerodrome, with the exception of meteorological observations, are organized on a national basis and are not normally assigned to an individual aerodrome.
- Remark:* In order to maximize efficiencies in the collection, preparation and dissemination of meteorological information, there is some consolidation of functions away from aerodrome sites.

CHAPTER 4

- 4.1.3 Special observations shall not be issued predicated solely on changes in RVR readings.
- Remark:* Owing to the variable nature of RVR reports, the inclusion of variability of RVR readings in routine observations, and the criteria established for the issuance of special observations associated with other observed parameters such as visibility, special observations shall not be issued predicated solely on RVR readings.
- 4.3.1 c) No special observations are issued for changes in air temperature.
- 4.3.3* a) Special observations are issued when the mean surface wind direction has changed by 45° in less than 15 minutes and the average speed on completion is 10 kt or more.
- e) and j) Cloud and visibility criteria are determined specifically for each aerodrome.
- 4.5.5* a) The averaging period for wind observations is 2 minutes for reports disseminated beyond the aerodrome.
- 4.5.6* Wind gusts are reported when they are 5 kt above the mean wind and the highest peak is at least 15 kt.
- 4.6.4* Canada uses statute miles (SM) to report visibility. The term CAVOK is not used.
- 4.6.5* When the visibility is not the same in every direction, the prevailing visibility is reported.
- 4.8.4* a) Ice crystals (IC) are reported when the associated visibility is 6 statute miles (9 000 m) or less.
- b) Mist (BR) is reported when the visibility is above ½ statute mile (1 000 m), but not more than 6 statute miles (9 000 m).
- 4.8.6* No intensity is reported for IC. Light intensity is not reported for BLSN, BLSA, BLDU. VC is not used to report FC. FC is defined as occurring at the observation site when within sight.

* Recommended Practice

- 4.13.1* The word AUTO is included between the time of observation and the surface wind when the observing site is automated. A three-letter group will appear between the time of observation and the surface wind when the observation is corrected.

Remark: A correction to a METAR observation will be indicated by CCA (if subsequent corrections are necessary, they will be indicated by CCB and so forth).

- 4.13.2 The term CAVOK is not used in reports.

CHAPTER 6

- 6.2.5* b) Criteria for the visibility are determined specifically for each aerodrome.

- d) Criteria for the clouds are determined specifically for each aerodrome.

- 6.2.17* The prevailing visibility, instead of minimum visibility, is given in aerodrome forecasts when the visibility is forecast to vary in different directions.

- 6.2.19* CAVOK and NSC are not used in meteorological forecasts in Canada.

- 6.3 Landing and take-off forecasts are provided by the TAF.

6.4

- 6.6.4 GAMET area forecasts are not issued in Canada.

Remark: Area forecasts (FACN) are used in their place.

CHAPTER 7

- 7.2.1 a) Domestic SIGMET messages do not include the location indicator of the air traffic services unit.

- e) SIGMET messages do not include the name of the flight information region or the control area.

- 7.3.1 AIRMET messages are not issued for ISOL CB or TCU.

Remark: Different definition for ISOL. See the details of the difference filed under Attachment F.

- 7.4.1 a) AIRMET messages do not include the location indicator of the air traffic services unit.

- e) AIRMET messages do not include the name of the flight information region or the control area.

- 7.5.1 Aerodrome warnings are not issued for meteorological conditions.

Remark: The information is provided through the regular or amended aerodrome forecast.

* Recommended Practice

- 7.6.1 Wind shear warnings are not issued. A wind shear group is included in the aerodrome forecast when significant wind shear is observed or forecast.

Remark: The wind shear group in the aerodrome forecast consists of WS, followed by the height of the wind shear in hundreds of feet, the wind speed and direction above the wind shear height.

CHAPTER 8

- 8.2.3* Aerodrome climatological tables and summaries concerning RVR are not available.

CHAPTER 9

- 9.4.13 The information is retained by the meteorological service providers.

CHAPTER 11

- 11.6.5* Aerodrome forecasts in VOLMET broadcasts are extracted from regular forecasts issued at 6-hour intervals and valid for 24 hours. Special forecasts are not issued for this purpose.

Attachment F

- Notes 4, 11 and 13 Isolated (ISOL) means spatial coverage less than 10 per cent of the area affected. Few (FEW) means spatial coverage between 10 and 25 per cent of the area affected. Scattered (SCT) means spatial coverage between 26 and 50 per cent of the area affected. Numerous (NMRS) or frequent (FQT) means spatial coverage greater than 50 per cent of the area affected.
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* Recommended Practice

CHAPTER 6

- 6.4.1 The national meteorological offices do not regularly prepare forecasts for take-off. However, such forecasts are prepared at the request of aeronautical users.

CHAPTER 4

- 4.3.1 c) Selected special temperature reports are not issued.
- d) Reports are disseminated only when an aircraft reports moderate or severe turbulence, moderate or severe icing and significant wind shear.
- 4.3.3* c) No reports are available on variation in wind speed.
- e) 1) Reports are only available for two values: 800 m and 1 500 m.
- 2) No selected special reports are issued for 5 000 m.
- h) Reports are only available for two values: 60 m and 150 m.
- 4.6.3* Only prevailing visibility is reported, and there are no reports on minimum visibility.

CHAPTER 6

- 6.4.1 A forecast for take-off is issued on request.

CHAPTER 7

- 7.1.1 a) At subsonic cruising levels, the following weather phenomena are added: moderate turbulence, moderate icing and moderate mountain wave.
- b) No SIGMET information is issued at transonic and supersonic levels.
- 7.3.1 The level for AIRMET information in East China is FL 100, in West China FL 150.
- 7.6 Warnings are only given for observed wind shear.

CHAPTER 9

- 9.3.8 Landing forecasts and forecasts for take-off are not displayed.

* Recommended Practice

CHAPTER 4

- 4.5.7* Multiple sensors for wind observations are not yet monitored by automatic equipment at all airports.
- 4.7.8* The runway visual range is determined on the basis of the maximum intensity (100 per cent) of the runway lights.
- 4.7.14*

CHAPTER 6

- 6.4.1 Forecasts for take-off are prepared only on request.
- 6.6.3 Only SECN 1 is available.
- 6.6.3 g) The following criteria are used: widespread mean surface wind speed exceeding 20 kt and/or widespread gusty wind with gusts exceeding 30 kt.

CHAPTER 7

- 7.1.1 b) SIGMET information is not issued for transonic levels and supersonic cruising levels.
- 7.5.1 Aerodrome warnings are issued by telephone in the Croatian language.
- 7.5.2* Aerodrome warnings are issued when at the aerodrome one or several of the following phenomena is expected:
- strong surface wind (when the mean surface wind is expected to exceed 27 kt and/or when gusts are expected to exceed 33 kt)
 - thunderstorm
 - hail
 - freezing precipitation
 - heavy snow.
- 7.6.2* Wind shear warnings are only issued when evidence of wind shear is available from aircraft observations.

CHAPTER 8 Available aeronautical climatological information does not meet the requirements.

Remark: Applicable information is in preparation.

CHAPTER 9

- 9.2.2* Information for supersonic aircraft is not available.
- 9.2.3*
- 9.3.8 c) Aerodrome warnings relating to the local aerodrome are not displayed.
- d) Forecasts for take-off are not displayed.
- h) Ground-based weather radar information is not displayed.
- 9.6.3 b)* Surface visibility up to 10 km is not available.

* Recommended Practice

CHAPTER 10

10.1.11* Information for supersonic aircraft is not available.

* Recommended Practice

14/2/01

CHAPTER 4

4.7.8* a) and b) RVR is determined on the basis of the maximum intensity (100 per cent) of the runway lighting.

CHAPTER 6

6.6.3 g) The value 40 km/h (20 kt) is used as the criterion for inclusion in the GAMET forecast of widespread mean surface wind speed. Moreover, the criterion of widespread gusty wind with gusts exceeding 60 km/h (30 kt) is used in the GAMET forecast, for example, SFC WSPD: 10/12 25 kt, GUSTS 40 kt.

CHAPTER 7

7.1.1 b) SIGMET information including the occurrence and/or expected occurrence of specified en-route weather phenomena at transonic levels and supersonic cruising levels is not issued.

7.6 Wind shear warnings are not issued.

CHAPTER 9

9.5.2 Upper wind and upper-air temperature charts for low-level flights will only be supplied for two altitudes (1 500 and 3 000 m). The upper wind and temperature information for altitude 600 m will only be available for the area of the Czech Republic and not in chart form.

* Recommended Practice

CHAPTER 4

- 4.3.3* e), h) and i) Selected special reports with regard to horizontal visibility and cloud amount are prepared taking account of the operating minima at each airport.
- 4.6.5* When the horizontal visibility is not the same in the direction of the approach and take-off centre lines, and one or both of their values are less than the VFR minima, the two visibilities which correspond to the approach and take-off centre lines are coded.
- 4.7* Runway visual range observations are not made.
- 4.12.5* When distant CB (cumulonimbus) are observed, their location and, where possible, the direction in which they are moving are indicated in abbreviated plain text.
- 4.13.2 CAVOK is not issued in METAR and SPECI reports.
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* Recommended Practice

CHAPTER 4

- 4.5.2* Surface wind observations at Tartu/Ülenurme are not representative. Sensors of surface wind are located near the tower. The threshold of RWY 26 is 8.5 m and the threshold of RWY 08 is 3 m lower than ARP. Surface wind observations at Pärnu aerodrome are not representative of conditions at a height of 6 to 10 m above the runway. The sensor of surface wind is located near the TWR at a height of 11.6 m relative to the threshold of RWY 21.
- 4.5.4 ATS units at Kuressaare, Kärđla, Pärnu and Tartu/Ülenurme aerodromes are not provided with surface wind indicators due to the features of the meteorological equipment used.
- 4.5.5* a)
4.5.6* For Kuressaare, Kärđla, Pärnu and Tartu/Ülenurme aerodromes, the averaging period for wind observations is 2 minutes for reports disseminated beyond the aerodrome due to the features of the meteorological equipment used.
- 4.5.9* a) Not in use for Kuressaare, Kärđla, Pärnu and Tartu/Ülenurme aerodromes due to the features of the meteorological equipment used.

CHAPTER 6

- 6.2.6* The period of validity of routine aerodrome forecasts for Kuressaare, Kärđla, Pärnu and Tartru/Ülenurme aerodromes is 6 hours due to the limited hours of operation.

CHAPTER 7

- 7.1.1 b) SIGMET information is not issued for transonic and supersonic cruising levels.

CHAPTER 8 Available aeronautical climatological information does not meet the requirements.

Remark: Applicable information is in preparation.

CHAPTER 9

- 9.2.2* Information for supersonic aircraft is not available.
9.3.3* *Remark:* Flights at transonic levels and supersonic cruising levels are not planned

CHAPTER 10

- 10.1.11* Information for supersonic aircraft is not available.
Remark: Flights at transonic levels and supersonic cruising levels are not planned.

* Recommended Practice

CHAPTER 6

6.6.3 GAMET area forecasts are not issued.

Remark: The forecast is for international use, but not widely adopted in Europe. Finland issues national area forecast and GAFOR.

CHAPTER 7

7.3.1 AIRMET information is not issued.

Remark: Finland issues national information called WXREP.

7.5.1 Aerodrome warnings will normally not be issued for meteorological conditions that could adversely affect aircraft on the ground, including parked aircraft.

Remark: This information is available by other means of service.

CHAPTER 3

3.5.2 e) AIRMET messages are not disseminated in France.

CHAPTER 4

4.3.3* j) Vertical visibility is not measured.

Remark: The current sensors are not suited to this type of measurement.

4.7.8* The light intensity of the lighting used to compute the RVR is the maximum intensity available on the runway in question.

Remark: It is necessary to have the maximum RVR so as not to penalize operators and take advantage of a well-defined single reference point for climatology.

CHAPTER 7

7.6.2* Wind shear warnings are not transmitted.

Remark: Lack of appropriate sensors.

CHAPTER 4

- 4.3.3 f)* In Germany, values of 200 m, 300 m and 550 m instead of 150 m, 350 m and 600 m are applied for runway visual range.
- 4.5.7* Multiple sensors for wind observations are not yet monitored by automatic equipment at all airports.
- 4.7.8* a) and b) The runway visual range is determined on the basis of the maximum intensity (100 per cent) of the runway lighting.
- 4.7.14* The runway visual range is determined on the basis of the maximum intensity (100 per cent) of the runway lighting.

CHAPTER 7

- 7.2.1 a) Germany does not identify all SIGMET messages by the location indicator of the ATS unit serving the flight information region. In those cases where the airspace is divided into a flight information region (FIR) and an upper flight information region (UIR) and when the SIGMET refers to the UIR only, the SIGMET will be identified by the location indicator of the ATS unit servicing the UIR.

* Recommended Practice

CHAPTER 7

7.1.1 a) SIGMET information concerning ISOL thunderstorms is issued.

CHAPTER 9

9.6.3* b) The expected movement of fronts is not available. Surface visibility over 5 000 m is indicated in all cases.
The expected centres and movements of cyclones and anticyclones are not available.

Remark: We have no computer algorithms for their calculation.

CHAPTER 4

- 4.3.1 No special observations are issued for changes in air temperature.
- 4.8.4* a) Ice crystals (IC) are reported when visibility is less than 10 km.
- b) Mist (BR) is reported when visibility is at least 1 000 m but not more than 10 km.
- c) Obscurations (lithometeors) are reported when visibility is less than 10 km, except DRSA and VA, which will be reported independent of visibility.

CHAPTER 7

- 7.1.1 b) SIGMET information concerning weather phenomena at transonic levels and supersonic cruising levels is not issued.
- 7.5.1 Aerodrome warnings for meteorological conditions which could adversely affect aircraft on the ground will normally not be issued.
- 7.6.1 Wind shear warnings are not issued.
- Remark:* The TWR provides arriving and departing aircraft with information on wind shear observed on the approach and take-off paths. Information on the observed occurrence of wind shear at an aerodrome can be included in routine observations and reports at that aerodrome.

CHAPTER 8

- 8.2.1* Aerodrome climatological tables are not prepared for Keflavik and Reykjavik.
-

* Recommended Practice

CHAPTER 3

- 3.3.1 c) Abbreviated plain-language amendments to upper wind and temperature charts are not issued.
- f) Abbreviated plain-language amendments to SIGWX charts and to significant weather forecast messages are not issued.
- h) WINTEN messages are not issued.

CHAPTER 4

- 4.3.1 c) Special observations and reports due to the increase in air temperature of 2°C or more from that given in the latest report are made only when the air temperature at the observation time is 32°C or more.
- 4.6.5* When the visibility is not the same in different directions, the prevailing visibility is reported.
- 4.8.6* Concerning IC, PO and FC, intensity is not reported. When a thunderstorm is observed, TS is used regardless of its location.

CHAPTER 7

- 7.1.1 SIGMET information concerning thunderstorms (OBSC TS, OBSC/EMBD/FRQ/SQL TS HVYGR), icing (SEV ICE (FZRA)), mountain waves (SEV MTW), duststorms (HVY DS) and sandstorms (HVY SS) is not issued.

CHAPTER 9

- 9.6.1 c) These items of information are not indicated in the significant weather charts.
- e) Moderate or severe icing not associated with “CB” is not indicated in the significant weather charts.
- f), g), i) These items of information are not indicated in the significant weather charts.
- m) This information is not provided for the time being.
-

* Recommended Practice

CHAPTER 4

- 4.5.5* The surface wind speed is indicated in m/sec. The averaging period for wind speed observations is 2 minutes for take-off, landing and dissemination of reports beyond the aerodrome.
- 4.11.1* At designated mountain aerodromes, pressure (QFE) is given in millimetres of mercury with a code letter M in front of the pressure value.

CHAPTER 6

- 6.2.20* Forecasts are issued if the temperature is above the following:
in winter: -30° or below
in summer: $+40^{\circ}$ or above.
- 6.6.3 Minimum en-route and area pressure is forecast in millimetres of mercury and, where necessary, in hectopascals.

CHAPTER 9

- 9.3.4* [. . . to less than 10 000 m . . .] The visibility limit of 10 km is used.

* Recommended Practice

CHAPTER 4

- 4.5.6* Variations from the mean wind speed (gusts) during the past 10 minutes are reported only as the maximum speed attained.
- 4.7.8* At Riga aerodrome, runway visual range is determined on the basis of the intensity of the runway lightning:
- 100 per cent in the day;
 - 30 per cent in the twilight;
 - 10 per cent in the night.
- At Liepaja aerodrome, meteorological visibility value readings of the transmissometer, daytime and twilight, are taken as RVR values. At night, meteorological visibility range measured with a transmissometer (100 per cent light intensity used) is converted to a low intensity range according to a special table.
- 4.8.6* In reports in abbreviated plain language, only the light and heavy intensity of the weather phenomena is used.
- 4.9.3* Cloud observations are made near the touchdown zone of the runways.
- 4.9.5* In reports in abbreviated plain language for take-off and landing, NSC (no significant clouds) is used when:
- the visibility is less than 10 km;
 - there are no clouds below 5 000 ft and no cumulonimbus (CB) or towering cumulus (TCU) clouds.

CHAPTER 6

- 6.4.1* Forecasts for take-off are not prepared.
- Remark:* No operational requirement.

CHAPTER 7

- 7.1.1 SIGMET information concerning weather phenomena at transonic levels and supersonic cruising levels is not issued.
- Remark:* No operational requirement.
- 7.5.2* Aerodrome warnings are issued when at the aerodrome one or several of the following phenomena is expected:
- strong surface wind and gusts (more than 30 kt);
 - squall;
 - freezing precipitation;
 - heavy snow (visibility less than 1 000 m during more than 2 hours);
 - air temperature falling to -30°C or below or increasing up to $+30^{\circ}\text{C}$ or above.

- CHAPTER 8** Not available.

* Recommended Practice

CHAPTER 4

- 4.14.2 Use is made of the conditional group, modifying the report (BBB) between the date and time group (YYGGgg) and the wind group (DDDffGFmFm), with the annotation COR if the meteorological report is corrected, or RTD if the meteorological report is delayed.
-

CHAPTER 4

4.7.13* Morocco communicates RVR assessments in the form $RD_R D_R / V_R V_R V_R V_R ii$.

CHAPTER 6

6.4 Forecasts for take-off are not provided.

CHAPTER 7

7.1.1 b) SIGMET information is not issued concerning en-route weather phenomena at transonic levels and supersonic cruising levels.

7.5 Aerodrome warnings are not issued.

CHAPTER 8

8.2* Aerodrome climatological tables are not available (in preparation).

8.3* Aerodrome climatological summaries are not available (in preparation).

* Recommended Practice

CHAPTER 4

- 4.3.3* Selected special reports are prepared in accordance with the following criteria:
- a) When the mean surface wind direction has changed by 30 degrees or more from that given in the latest report, the mean wind speed before and/or after the change being 10 kt or more.
 - e) When general visibility is improving and changes to or passes one of the following values, or when general visibility is deteriorating and passes one of the following values: 800, 1 500, 3 000, 5 000 or 8 000 m.
 - g) In addition, light precipitation in the form of ice pellets, hail, soft hail and snow grains is reported.
 - h) When the height of the base of the lowest cloud layer of BKN or OVC extent is lifting and reaches or passes through one of the following values, or is lowering and passes through one of the following values: 100, 200, 300, 500, 1 000 or 1 500 ft.
 - j) When the sky is obscured and the vertical visibility is improving and changes to or passes one of the following values, or when vertical visibility is deteriorating and passes one of the following values: 100, 200, 300 or 500 ft.

CHAPTER 6

- 6.2.5* The criteria used for the inclusion of change groups in aerodrome forecasts are as follows:
- a) — when the surface wind direction is forecast to change 30 degrees or more when the 10-minute averaged wind speed before and/or after the change is 10 kt or more;
— when the 10-minute averaged surface wind speed is forecast to change 10 kt or more.
 - b) When the general visibility is forecast to improve and to change to or to pass one of the following values, or when the general visibility is forecast to deteriorate and to pass one of the following values: 150, 350, 600, 800, 1 500, 3 000, 5 000 or 8 000 m.
 - c) In addition, light precipitation in the form of ice pellets, hail, soft hail and snow grains is forecast.
 - d) When the height of the base of the lowest cloud layer of BKN or OVC extent is forecast to lift and to reach or pass through one of the following values, or to lower and to pass through one of the following values: 100, 200, 300, 500, 1 000 or 1 500 ft.
 - g) When the vertical visibility is forecast to improve and to change to or to pass one of the following values, or when the vertical visibility is forecast to deteriorate and to pass one of the following values: 100, 200, 300 or 500 ft.
- 6.3.10 a) The trend forecasts indicate the following changes:
- When the surface wind direction is forecast to change 30 degrees or more when the 10-minute averaged wind speed before and/or after the change is 10 kt or more.

* Recommended Practice

6.3.11 The trend forecasts indicate the following changes:

When general visibility is forecast to improve and to change to or to pass one of the following values, or when general visibility is forecast to deteriorate and to pass one of the following values: 150, 350, 600, 800, 1 500, 3 000, 5 000 or 8 000 m.

6.3.12 The trend forecasts indicate the following changes:

In addition, light precipitation in the form of ice pellets, hail, soft hail and snow grains is forecast.

6.3.13 The trend forecasts indicate the following changes:

When the height of the base of the lowest cloud layer of BKN or OVC extent is forecast to lift and to reach or pass through one of the following values, or to lower and to pass through one of the following values: 100, 200, 300, 500, 1 000 or 1 500 ft.

6.3.14 The trend forecasts indicate the following changes:

When the vertical visibility is forecast to improve and to change to or to pass one of the following values, or when vertical visibility is forecast to deteriorate and to pass one of the following values: 100, 200, 300 or 500 ft.

CHAPTER 2

- 2.3 Operators requiring meteorological service shall notify the meteorological service provider.

CHAPTER 3

- 3.5 SIGMET information is issued for the New Zealand FIR and for the Auckland Oceanic FIR north of latitude 45 degrees S. SIGMET information is provided for notified operations within the Auckland Oceanic FIR south of latitude 45 degrees S by arrangement.

CHAPTER 4

- 4.1.8* Observation systems are not installed to measure runway visual range.
- 4.3.1 Reports of routine observations are identified as SPECI reports when the observed conditions meet the criteria used for special observations.
- 4.3.3* e) In addition to the criteria specified, SPECIs are issued when the visibility changes to or passes 8 km.
- h) The height criteria used are 200 (at selected aerodromes), 500, 1 000 and 1 500 ft.
- j) Vertical visibility is not available.
- 4.6.4* The term CAVOK is not used.
- 4.7* Runway visual range is not reported for precision approach runways. Runway visual range observations are only made for specific take-off operations at approved aerodromes, using a human observer system.
- 4.8.6* VC (vicinity) may be used with RA, DZ or SN when the observer has evidence that the observed precipitation is of the type described.
- 4.9.5* Vertical visibility is not available.
- 4.13.2 The term CAVOK is not used.
- 4.14.2 With regard to METAR or SPECI reports, when horizontal visibility is 10 km or more, it will be coded in whole kilometres followed immediately by the letters “KM”, e.g. 15 KM.

CHAPTER 5

- 5.8.1 Forms for special air-reports of volcanic activity will not be available. Pilots are expected to report instances of unusual volcanic activity or volcanic ash clouds by way of special air-reports.

* Recommended Practice

CHAPTER 6

- 6.2.5* b) TAFs indicate a change when the horizontal visibility is expected to change to or pass through: 800, 1 500, 3 000, 5 000 m or 8 km.
- d) TAFs indicate a change when the height of the base of the lowest cloud layer or mass of BKN or OVC extent is expected to change to or pass through: 200 (at selected aerodromes), 500, 1 000 or 1 500 ft.
- g) Vertical visibility forecasts are not available.
- 6.2.8 With regard to TAF forecasts, when the horizontal visibility is expected to be 10 km or more, it will be coded in whole kilometres followed immediately by “KM”, e.g. 15 KM.
- 6.2.19* CAVOK and vertical visibility are not used.
- 6.3.11 Trend-type landing forecasts indicate a change when the horizontal visibility is expected to change to or pass through: 800, 1 500, 3 000, 5 000 m or 8 km.
- 6.3.13 Trend-type landing forecasts indicate a change when the height of the base of the lowest cloud layer or mass of BKN or OVC extent is expected to change to or pass through: 200 (at selected aerodromes), 500, 1 000 or 1 500 ft.
- 6.3.14 Vertical visibility forecasts are not available.
- 6.5.6 Route forecasts are issued in a self-evident plain language form.

CHAPTER 7

- 7.2.1 In SIGMETs issued for the New Zealand FIR, the date-time groups are given in both local time and UTC.
- 7.6.1 Information about wind shear observed on the approach or take-off paths is included, when appropriate, in METAR and SPECI reports. Information on the expected existence of wind shear which could adversely affect aircraft on approach and take-off paths is not provided.

CHAPTER 9

- General The type, the format and the means and the point of supply of meteorological information to operators and flight crew members are as agreed between the meteorological service provider and the operator or flight crew member.
- 9.4.13 Such documentation is retained by the meteorological service providers.

* Recommended Practice

CHAPTER 7

7.1.1 b) SIGMET information concerning weather phenomena at transonic levels and supersonic cruising levels is not issued.

Remark: No operational requirement.

7.5.1 Aerodrome warnings for meteorological conditions that could adversely affect aircraft on the ground will normally not be issued.

Remark: Hitherto little requirement.

CHAPTER 4

- 4.2.1 Only routine observations are made throughout the 24 hours at the Tocumen International Airport.
- 4.3.1 c) No special observation is formulated regarding change of temperature.
- 4.3.3* All reports of special observations are prepared as selected special reports.
- 4.7* No observation of runway visual range (RVR) is made.

CHAPTER 6

- 6.3.2* Landing forecasts are not prepared; aerodrome forecasts are used for this purpose.
- 6.4.2* Forecasts for take-off are not prepared on a regular basis; they are only prepared upon request.

CHAPTER 7

- 7.3 AIRMET information is only issued locally, upon request.
- 7.6.2* Wind shear warnings are only issued when evidence of the existence of wind shear is derived from aircraft observations.

CHAPTER 8

- 8.2.1* Aerodrome climatological tables are only prepared for Tocumen and Paitilla aerodromes.

CHAPTER 9

- 9.6.3* Significant weather charts are not prepared for low-level flights.

CHAPTER 11

- 11.1.5 Telecommunications at meteorological offices and ATS dependencies are made by telephone.
- 11.6 VOLMET broadcasts are not prepared.

* Recommended Practice

CHAPTER 6

- 6.6.3 j) After the expression “mountain obscuration”, we include the words “artificial obstacles (obstacles) not seen”, for example, ARTFL OBSTL (OBSTL)/NS.

CHAPTER 7

- 7.3.1 In the left column, after the phrase “occasional thunderstorms with hail”, we include “occasional small hail”.

In the right column, after the abbreviation “OCNL TSGR”, we include “OCNL GS”.

In the left column, after the expression “mountain obscuration”, we insert the words “artificial obstacles (obstacles) not seen”. In the right column, after the abbreviation “MT OBSC”, we insert “ARTFL OBSTL(OBSTL)/NS”.

In the right column, in the section

“ISOL CB
OCNL CB
FRQ CB”

we add “(+ height of the base and top and units)”.

In the right column in the section

“ISOL TCU
OCNL TCU
FRQ TCU”

we add “(+ height of the base and top and units)”.

CHAPTER 4

4.7.8* RVR is determined on the basis of the maximum intensity (100 per cent) of the runway lighting.

CHAPTER 7

7.1.1 b) SIGMET information concerning weather phenomena at transonic levels and supersonic cruising levels is not issued.

7.6.2* Wind shear warnings are only issued when evidence of wind shear is available from aircraft observation.

* Recommended Practice

CHAPTER 4

4.5.5* The unit used to measure wind speed is metres per second.

4.5.6*

4.5.8* *Remark:* The Russian Federation uses the metric system of measurement.

4.5.9*

4.7.14* The mean maximum and mean minimum values of RVR for one minute are not indicated.

Remark: Not permitted by the technical capabilities of the meteorological equipment being used.

* Recommended Practice

CHAPTER 4

- 4.5* The unit used for wind speed is metres per second. The abbreviation “MPS” or an indication of the unit is used in all reports.
- 4.7.8* a) and b) RVR is determined on the basis of the maximum intensity (100 per cent) of the runway lighting.
- 4.7.14*

CHAPTER 6

- The unit used for wind speed is metres per second. The abbreviation “MPS” is used in all forecasts.
- 6.5.6 Area and route forecasts in code form WITEM and ROFOR are not used in Slovakia.

CHAPTER 7

- 7.1.1 b) SIGMET information at transonic and supersonic levels is not issued.

* Recommended Practice

CHAPTER 3

- 3.3.1 c) Amendments to upper wind and temperature charts are not supplied in abbreviated plain language.
- f) Significant weather forecast messages in abbreviated plain language or plain-language amendments to significant weather charts are not provided.
- h) No WITEM messages are prepared.

CHAPTER 6

- 6.3.14 Vertical visibility observations are not available.
- 6.4.1 Forecasts for take-off are provided only on request.

CHAPTER 7

- 7.5.1 Aerodrome warnings will not normally be disseminated for meteorological conditions which could adversely affect aircraft on the ground, including parked aircraft.

Remark: This information is available by other means.

- 7.6.1 The TWR provides arriving and departing aircraft with information on wind shear observed in the approach and take-off paths. Information is not provided concerning the expected existence of wind shifts that could adversely affect aircraft on the approach path or take-off path.

CHAPTER 9

- 9.3.8 d) The corresponding information is not displayed.
-

CHAPTER 4

- 4.8.4* a) Ice crystals (IC) are reported when visibility is less than 10 km.
- b) Mist (BR) is reported when visibility is at least 1 000 m but not more than 10 km.
- c) Obscurations (lithometeors) are reported when visibility is less than 10 km except DRSA and VA, which will be reported independent of visibility.

CHAPTER 7

- 7.1.1 b) SIGMET information is not issued concerning en-route weather phenomena at transonic levels and supersonic cruising levels.
- 7.5.1 Aerodrome warnings will normally not be issued for meteorological conditions that could adversely affect aircraft on the ground, including parked aircraft.
- 7.6.1 Due to limited capacity for maintaining a continuous survey of wind shear conditions, wind shear warnings are not issued. Information on the observed occurrence of wind shear at an aerodrome is included in routine observations and reports issued at that aerodrome.

CHAPTER 9

- 9.4.13 Copies of printed charts are retained at flight planning offices and OPMET data are retained in a central database for at least 30 days. This information is made available for inquiries or investigations. A copy of the written or printed flight documentation supplied to each individual flight crew member cannot be retained.

* Recommended Practice

CHAPTER 6

- 6.6.3 g) Surface wind speed is indicated in metres per second (m/s).
- q) Expected movements of pressure centres and fronts are indicated in km/h.

CHAPTER 7

- 7.3.1 Surface wind speed is indicated in metres per second (m/s).
-

CHAPTER 4

4.3.3* f) Not being disseminated beyond the aerodrome of origin.

* Recommended Practice

CHAPTER 3

- 3.2.1 b) and c) The capability to comply continues to be developed. Status reports will be available through the ICAO WAFS Study Group and ICAO regional meetings.

CHAPTER 4

- 4.3.1 c) The United States does not prepare SPECI for changes in air temperature.
- 4.3.3* a) Practices require SPECI for wind shift when wind direction changes by 45° or more in less than 15 minutes and the wind speed is 10 kt or more throughout the wind shift.
- b) Practices do not require SPECI for increases of mean surface wind speed.
- c) Practices require SPECI for squall, where squall is defined as a strong wind characterized by a sudden onset in which the wind speed increases by at least 16 kt and is sustained at 22 kt or more for at least one minute.
- d) Practices do not require SPECI for wind direction changes based on local criteria.
- f) SPECI not prepared for the equivalents in feet of 150, 350 and 600 m. United States military stations may not report a SPECI based on RVR. SPECI is made when the highest value from the designated RVR runway decreases to less than, or if below, increases to equal to or exceeds 2 400 ft during the preceding 10 minutes.
- g) Practices do not require SPECI for the onset, cessation or change in intensity of: freezing fog; moderate or heavy precipitation (including showers thereof); low drifting dust, sand or snow; blowing dust, sand or snow (including snowstorm); duststorm or sandstorm. SPECI is made when referenced weather phenomena cause changes in the visibility, ceiling or sky condition which meet criteria for SPECI.
- h) and j) Practices do not require SPECI when the height of the lowest BKN or OVC cloud layer or vertical visibility changes to or passes 100 ft (30 m) unless an approach minimum exists. SPECI is made when the ceiling (rounded off to reportable values) forms or dissipates below, decreases to less than, or if below, increases to equal to or exceeds 3 000, 1 500, 1 000 and 500 ft, the lowest standard instrument approach procedure minimum published in the National Ocean Survey (NOS) U.S. Terminal Procedures. If none published, then 200 ft.
- 4.5.6* Practice is to use a 6 kt criterion for average wind speed to report variable wind direction in METAR and
- 4.5.9* a) SPECI. The United States uses a 3 kt criterion for wind speed to forecast variable wind direction in TAF.
- b) Practices define wind gust as rapid fluctuations in wind speed with a variation of 10 kt or more between peaks and lulls. Wind speed data for the most recent 10 minutes is examined and a gust, the maximum instantaneous wind speed during that 10-minute period, is reported if the definition above is met during that period.

* Recommended Practice

- 4.6.5* Practice is to report prevailing visibility. Prevailing visibility is defined as the visibility that is considered representative of visibility conditions at the station (automated observation), or the greatest distance seen throughout at least half the horizon circle, not necessarily continuous (manual observation). Sector visibility, defined as the visibility in a specified direction that represents at least a 45 degree arc of the horizon circle, may be reported.
- 4.7.14* RVR values reported in feet (ft) are based on light setting 5 (highest available) for the designated instrument runway. RVR tendency is not reported.
- 4.8.2* The following weather elements are augmented manually at designated automated station observation sites: FC, TS, GR, GS and VA. At selected airports, additional present weather elements may be provided. With the exception of volcanic ash, present weather is reported when prevailing visibility is less than 7 statute miles or considered operationally significant. Volcanic ash is always reported when observed.
- 4.8.4* The practice is not to report the following weather phenomena at unstaffed stations in METAR or SPECI: DZ, PL, IC, SG, GR, GS, SA, DU, FU, VA, PY, PO, SQ, FC, DS and SS.
- 4.8.5* The practice is not to report the following characteristics of present weather phenomena in METAR or SPECI: SH, DR, MI, BC and PR at unstaffed stations.
- 4.8.6* The practice with respect to the proximity indicator VC is between 5 to 10 statute miles from the point of observation with the exception of precipitation for which VC indicates > 0 to 10 statute miles from the point of observation.
- 4.9.5* The United States reports only up to 3 layers at automated sites and up to 6 layers at manual sites. Cloud layer amounts are a summation of layers at or below a given level, utilizing cumulative cloud amount. In addition, at automated sites which are unstaffed, cloud layers about 12 000 ft are not reported. At staffed automated sites, clouds above 12 000 ft may be augmented.
- 4.13.1* Practices require the inclusion of a modifier field to designate AUTO for totally automated observations (no human augmentation) or COR for corrected observations between the date and time of the report and the surface wind direction and speed.
- 4.13.2 The United States does not use the term CAVOK in meteorological reports.

CHAPTER 6

- 6.2.5* b) Change groups and amendment criteria below 1/2 statute mile (800 m) are not used.
- d) The 100 ft (30 m) change group and amendment criterion are not used.
- 6.2.17* Forecast visibility increments used consist of 1/4 mile from 0 (zero) to 1 mile, 1/2 mile from 1 to 2 miles and 1 mile above 2 miles.

* Recommended Practice

- 6.2.18* Practices require the forecast of non-convective low-level wind shear within 2 000 ft of the ground in the Optional Group. The forecast consists of WS (wind shear); height of the wind shear in hundreds of feet and wind speed and direction above the wind shear height, using METAR and TAF coding regulations.
- 6.2.19* The United States does not use the terms CAVOK and NSC in meteorological forecasts.
- 6.3 Landing and take-off forecasts are provided by the TAF.
6.4
- 6.5.1 Upper winds and upper-air temperatures are not included in area forecasts. Tabular wind and temperature forecasts are available in separate products.
- 6.6.4 Area forecasts are issued 3 times a day in the United States, with the exception of Alaska and Hawaii where they are issued 4 times a day. They are valid for a 12-hour period beginning 1 hour after issuance and have an 18-hour outlook.

CHAPTER 7

- 7.3.1 The United States does not include cloud amount or type in AIRMET. The United States issues AIRMET denoting areas of IFR and MVFR based on either ceiling or visibility criteria.

CHAPTER 9

- 9.6.1 The United States does not report ISOL, OCNL or FRQ in accordance with the guidance on the use of the terms given in Attachment F. The United States reports isolated (ISOL) to mean the phenomenon affects an area less than approximately 3 000 square miles or is widely separated in time, and widespread (WDSPR) to mean more than 50 per cent of area.
- 9.6.3*
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* Recommended Practice